User's Manual

USB DOCK - Einstein

Omnidirectional Control Technology Inc.

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Introduction

Thank you for ordering the USB DOCK. The USB DOCK is an intelligent expansion module which connects to a PC or notebook via Universal Serial Bus (USB) port, providing one high-speed RS-232 serial port, one printer port, one PS/2 keyboard & mouse and 4 downstream USB ports. The USB DOCK features easy connectivity for traditional serial devices, keyboard, mouse and other USB devices.
By simply plugging in an USB DOCK, you will:

- Add one high-speed serial port, one printer port, one PS/2 keyboard & mouse and 4 downstream USB ports to your PC or notebook in seconds.
- Improve the inconvenience of configuring old PC solutions like card extension solutions, which require to adjust IRQ or jumper settings and the incompatibility of various brands of docking solution or bus repeater.
- Avoid the hassle of removing your PC case, or rebooting the operating system during installation.

System Requirements

- A PC with a minimum of a 75MHz Pentium, or equivalent
- A minimum of 16M bytes of RAM.
- One available USB type A downstream port. (either UHCI or OHCI)
- Windows 98 or later.

Package Contents

The product you purchase should contain the equipment and accessories shown as follows:

- USB DOCK converter
- One 6 feet USB AB type cable
- One 1.8A switching power adapter (optional)
- One USB DOCK driver and User' s manual CD

Connectors

- One DB-9 RS-232 serial interface connector supports baud rates from 1,200 to 115.2K.
- One DB-25 parallel connector supports IEEE-1284 bi-directional printer port.
- One Mini-din for PS/2 keyboard, mouse.
- Four USB receptacle type A downstream ports.
- One USB type B upstream connector.

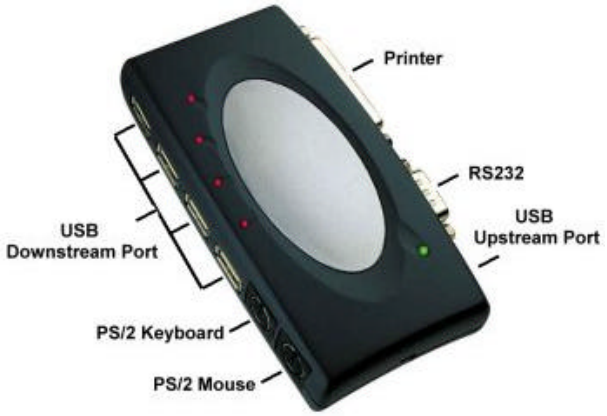

Figure 1

USB DOCK Functions

The available functions of USB DOCK depend on the status of power supplied:

- Bus powered
  1. Connecting USB cable to PC to provide bus power.
  2. When you provide bus power only, the PS/2 mouse & keyboard, RS232 and printer functions will be enabled. However, the USB Downstream Ports are disabled.
- External powered
  1. Connecting power adapter to provide external power.
  2. When you provide external power, the USB Downstream Ports are enabled, and you can use all the functions of USB DOCK.

LED Indicator

- ## Power Indicator

  The Power Indicator will turn **ON** when bus power is supplied.

- ## USB Indicators

  There are four USB indicators to show if the USB Downstream Ports are ready for use.

  1. If the USB DOCK is not ready for use or only bus power is supplied, the USB Indicators will turn **OFF,** and the USB Downstream Ports can not be used.
  2. If the USB DOCK is ready for use, and external power is supplied, the USB Indicators will turn **ON**, and you can use all the functions of USB DOCK.
  3. If over-current happens for certain USB Downstream Port, the corresponding USB Indicator will turn **OFF** to indicate that this port is not working now.
  4. When over-current situation is solved, the USB Indicator will turn **ON** again.

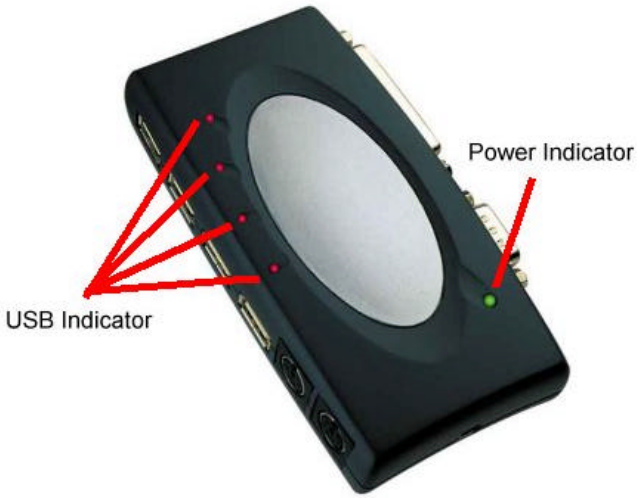

Figure 2

Installing USB DOCK

1. This installation guide is written in accordance with Windows 98/98SE. For Windows 2000/XP, the step A, B, and C of the "Driver Installation" section will be skipped.

2. Power on your computer and make sure that the USB port is enabled and working properly. Please refer to the "**application note 1**" if you have any trouble.

3. Connect the power adapter into USB DOCK.

4. Connect the USB cable into USB DOCK and the USB port of your PC.

5. Windows will first detect the HUB device. Install HUB using operating system software. Please refer to step A of "Driver Installation" section. (This section for Windows 98 only)

6. Windows will detect the IEEE-1284 device. Please refer to step B of "Driver Installation" section. (This section for Windows98/98SE/Me only)

7. Windows will detect the PS/2 keyboard & mouse device. Please refer to step C, the "Driver Installation" section.

8. And Windows will detect the RS232 device. Please refer to step D of "Driver Installation" section.

Driver Installation

The driver installation is divided into 4 steps. Please install USB DOCK step by step by following the instruction from Step A-D.

Step A: (This step for Windows 98 only)
To install the HUB function of the USB DOCK:

Add New Hardware Wizard
This wizard searches for new drivers for:
Generic USB Hub
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel

Figure A-1

A1. Click "Next" to Continue (Ref Figure A-1)

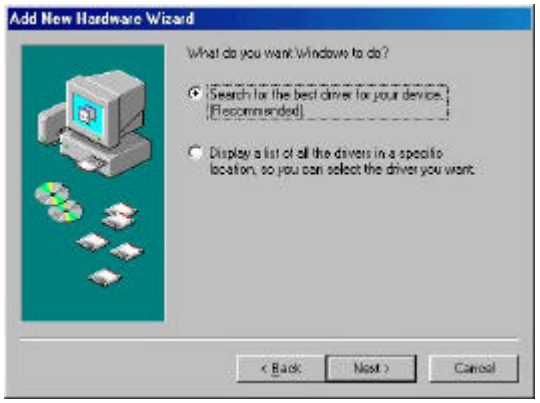
Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended)
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel

Figure A-2

A2. Click "Next" to initiate a search for the best driver for your device (Ref Figure A-2)

Add New Hardware Wizard
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
Floppy disk drives
CD-ROM drive
Microsoft Windows Update
Specify a location:
A:\Win98
Browse...
< Back
Next >
Cancel

Figure A-3

A3. Please insert the "Windows 98" CD into CD-ROM. Click "Next" to continue (Ref Figure A-3)

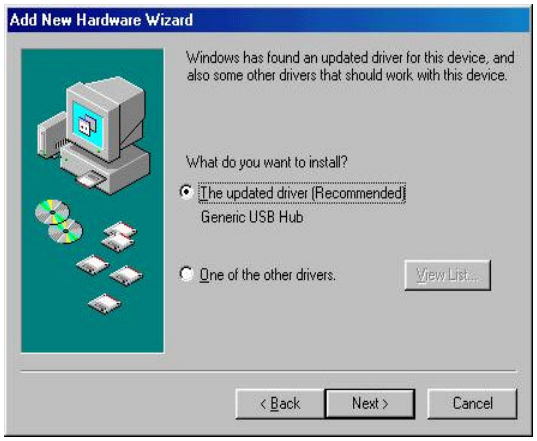
Add New Hardware Wizard
Windows has found an updated driver for this device, and also some other drivers that should work with this device.
What do you want to install?
The updated driver (Recommended)
Generic USB Hub
One of the other drivers.
View List...
< Back
Next >
Cancel

Figure A-4

A4. Click “Next” to continue
(Ref Figure A-4)

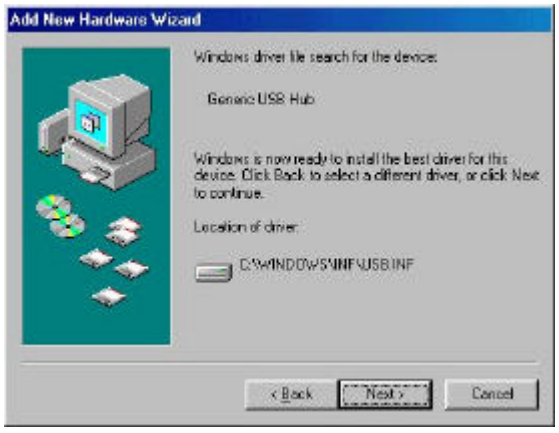
Add New Hardware Wizard
Windows driver file search for the device:
Generic USB Hub
Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
Location of driver:
C:\WINDOWS\INF\USB.INF
< Back
Next >
Cancel

Figure A-5

A5. Click “Next” to continue
(Ref Figure A-5)

Figure A-6

A6. Click “Finish”, Windows has finished installing USB Hub driver
(Ref Figure A-6)

Step B: (This section for Windows98/98SE/Me only)
To install the software for USB to Printer Converter of the USB DOCK:

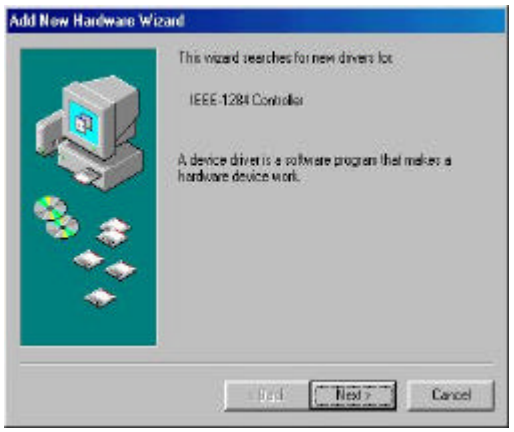
Add New Hardware Wizard
This wizard searches for new drivers for:
IEEE 1284 Controller
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel

Figure B-1

B1. Insert the "USB DOCK driver diskette" into drive A.
Click "Next" to continue
(Ref Figure B-1)

Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended).
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel

Figure B-2

B2. Click "Next" to initiate the search for the best driver for your device
(Ref Figure B-2).

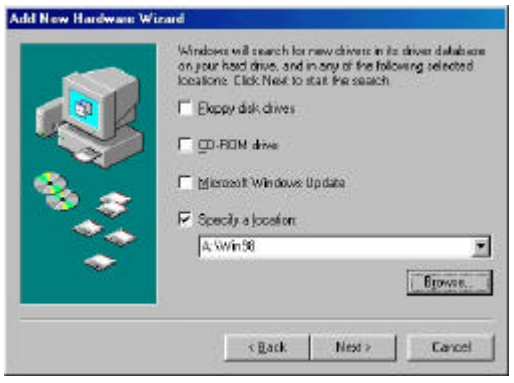

Figure B-3

B3. Selected Floppy diskette drives location as "A:\Win98".
Click "Next" to start and search.
(Ref Figure B-3).

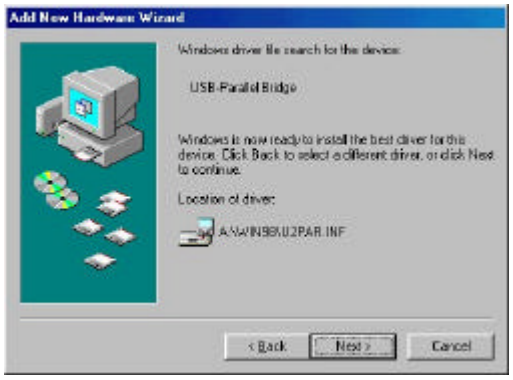

Figure B-4

B4. Click “Next” to continue
(Ref Figure B-4)

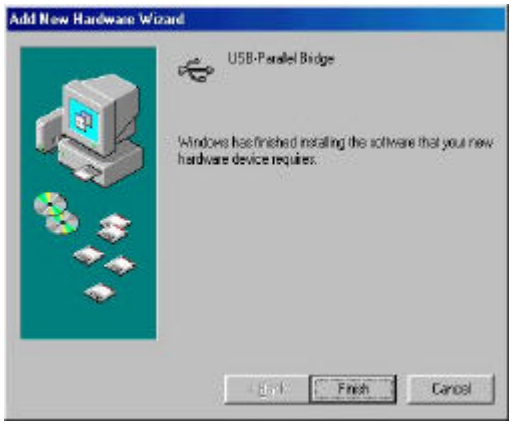
Add New Hardware Wizard
USB-Parallel Bridge
Windows has finished installing the software that your new hardware device requires.
Finish
Cancel

Figure B-5

B5. Click “Finish”, windows has finished installing the printer driver
(Ref Figure B-5)

Before connecting the printer on the parallel port of USB DOCK-Einstein, the printer driver must be installed in advance, or it might print unknow format of character.

Please refer "Setting Up the Printer Device" section to connect your printer to the USB DOCK.

Step C. (This section for Windows98/98SE only)

To install the PS/2 keyboard & mouse driver of USB DOCK:

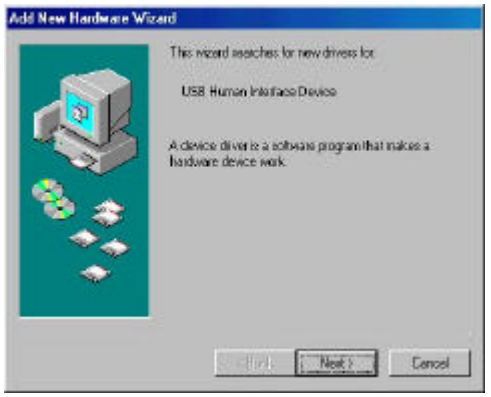
Add New Hardware Wizard
This wizard searches for new drivers for:
USB Human Interface Device
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel

Figure C-1

C1. Click "Next" to continue
(Ref Figure C-1)

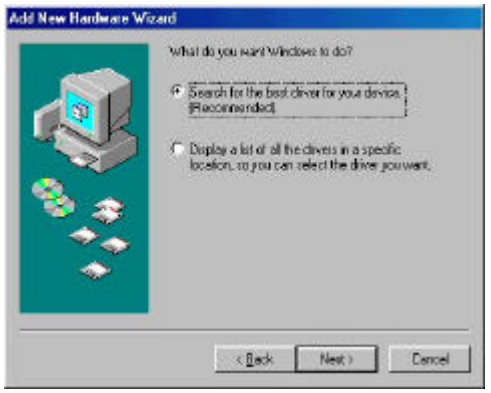
Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended)
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel

Figure C-2

C2. Click "Next" to initiate search for the best driver for your device
(Ref Figure C-2)

Figure C-3

C3. Please insert "Windows 98" CD into CD-ROM drive. Click "Next" to continue
(Ref Figure C-3)

Add New Hardware Wizard
Windows driver file search for the device:
USB Human Interface Device
Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
Location of driver:
C:\WINDOWS\INF\HIDDEV.INF
< Back
Next >
Cancel

Figure C-4

C4. Click “Next” to continue
(Ref Figure C-4)

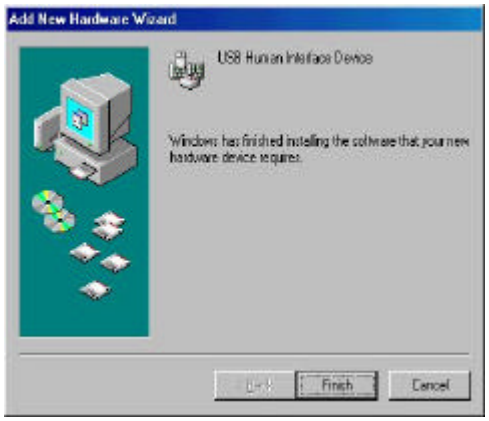
Add New Hardware Wizard
USB Human Interface Device
Windows has finished installing the software that your new hardware device requires.
Finish
Cancel

Figure C-5

C5. Click “Finish”, Windows has finished installing the USB HID driver for PS/2 keyboard & mouse.
(Ref Figure C-5)

Step D:

To install the USB to serial port driver of the USB DOCK, please make sure the driver diskette is inserted:

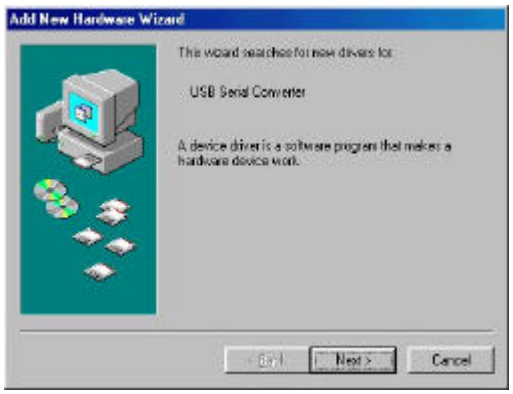
Add New Hardware Wizard
This wizard searches for new drivers for:
USB Serial Converter
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel

Figure D-1

D1. Click "Next" to continue
(Ref Figure D-1)

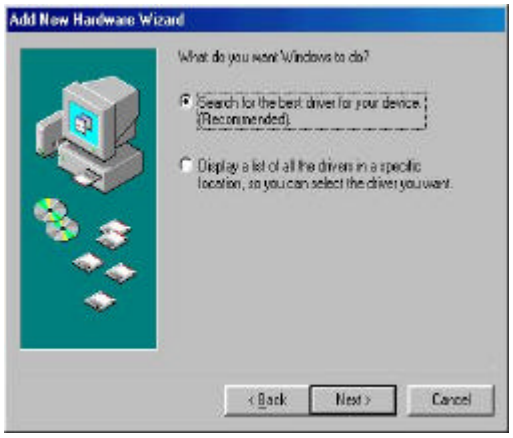
Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended).
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel

Figure D-2

D2. Click "Next" to initiate a search for the best drive for your device
(Ref Figure D-2)

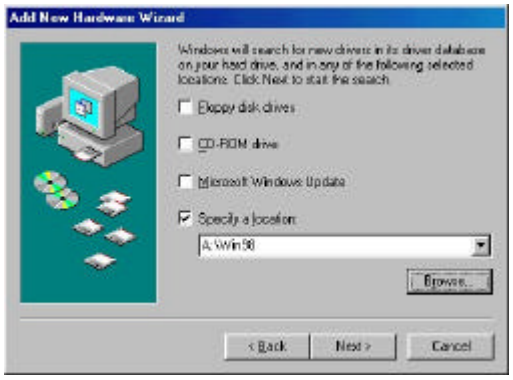

Figure D-3

D3. Select Floppy diskette drives location. Click "Next" to start and search for the best driver for your device
(Ref Figure D-3)

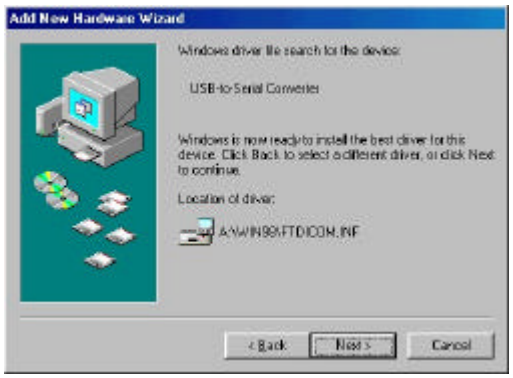
Add New Hardware Wizard
Windows driver file search for the device:
USB-to-Serial Converter
Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
Location of driver:
A:\WIN98\FTDICOM.INF
< Back
Next >
Cancel

Figure D-4

D4. Click “Next” to continue
(Ref Figure D-4)

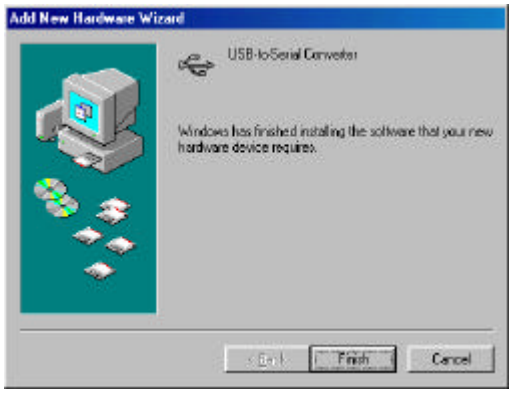

Figure D-5

D5. Click “Finish”, Windows has finished installing RS-232 port driver
(Ref Figure D-5)

Step E. (For Windows 2000/XP only)

To install the USB to serial port driver of the DOCK COMMANDER, please make sure the driver diskette/CD is inserted:

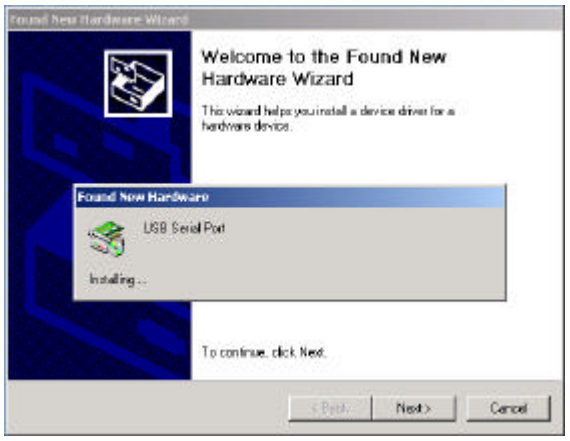
Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install a device driver for a hardware device.
Found New Hardware
USB Serial Port
Installing...
To continue, click Next.
< Back
Next >
Cancel

Figure E-1

E1. Click “Next” to continue
(Ref Figure E-1)

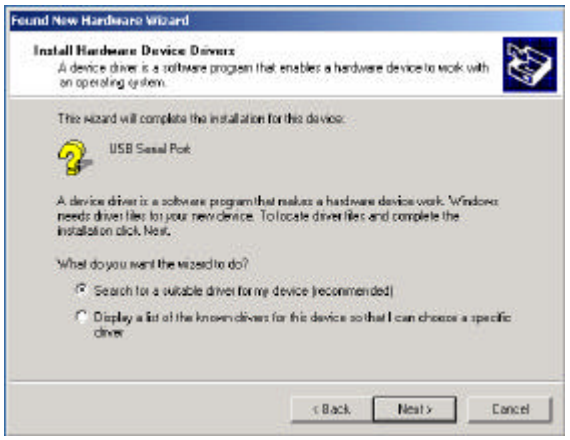
Found New Hardware Wizard
Install Hardware Device Drivers
A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
USB Serial Port
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< Back
Next >
Cancel

Figure E-2

E2. Click “Next” to initiate search for the best driver for your device
(Ref Figure E-2)

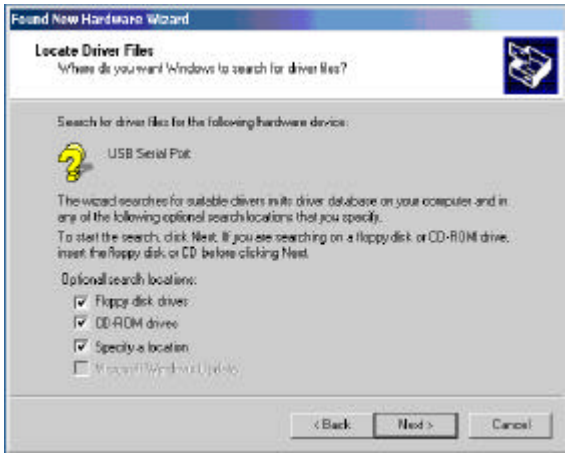
Found New Hardware Wizard
Locate Driver Files
Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
USB Serial Port
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< Back
Next >
Cancel

Figure E-3

E3. Please insert “Dock Commander Driver” diskette/CD into Floppy/CD-ROM drive and specify the location. Click “Next” to continue
(Ref Figure E-3)

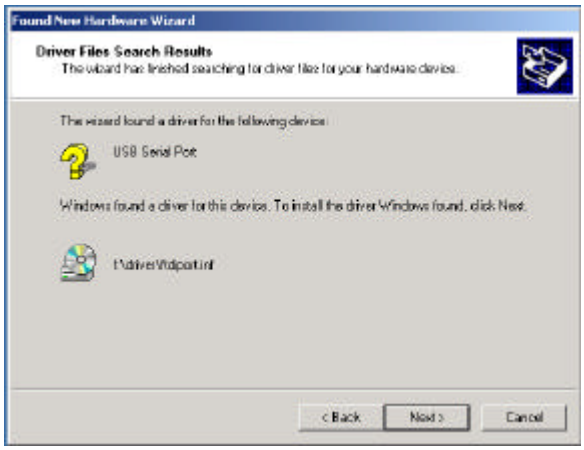
Found New Hardware Wizard
Driver Files Search Results
The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
USB Serial Port
Windows found a driver for this device. To install the driver Windows found, click Next.
I:\driver\Wdport.inf
< Back
Next >
Cancel

Figure E-4

E4. Click “Next” to continue
(Ref Figure E-4)

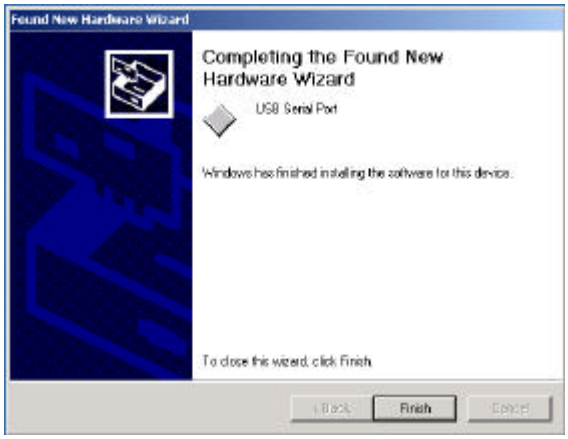
Found New Hardware Wizard
Completing the Found New Hardware Wizard
USB Serial Port
Windows has finished installing the software for this device.
To close this wizard, click Finish.
Finish

Figure E-5

E5. Click “Finish”, Windows has finished installing Serial port driver.
(Ref Figure E-5)

- Before connecting the modem on the serial port of USB DOCK, the modem driver must be installed in advance, otherwise it might operate unexpectedly.
- Please refer to "Setting Up the HyperTerminal with USB to serial port" section as an example of routing your COM port setting.

Congratulations!! You have finished installing USB DOCK.

Please click on **Start**, **Settings, Control Panel,** double click **System**, and click on **Device Manager**. Double check the Human Interface Devices, Keyboard, Mouse, Ports, and Universal serial bus controller of the dialog box to see if they work properly.

Figure 3

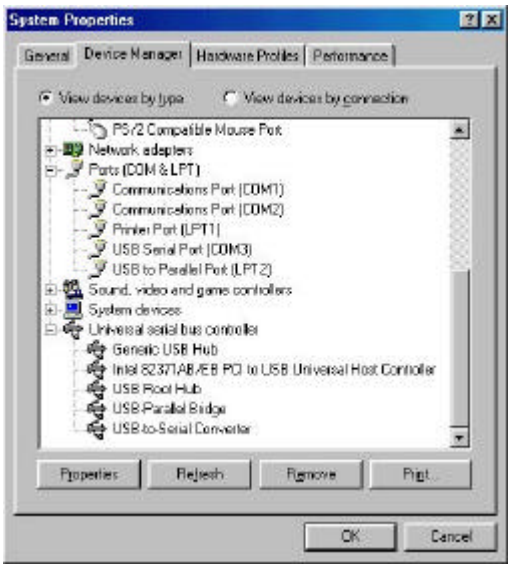

Figure 4

Set Up the Printer Device

Follow the steps below to connect your printer to the USB DOCK with your PC:

For Windows 98/98SE and Me:

1. Turn off your printer. Plug the cable to connect USB DOCK parallel port and printer. Turn on the printer afterwards.

2. Turn on your computer and plug in the USB cable to connect the USB DOCK and the USB port of PC.

3. Please click on **Start**, **Settings**, **Control Panel**, double click **System**, and click on **Device Manager**. Check which printer port is located by USB to parallel port. The following example is located as LPT2.

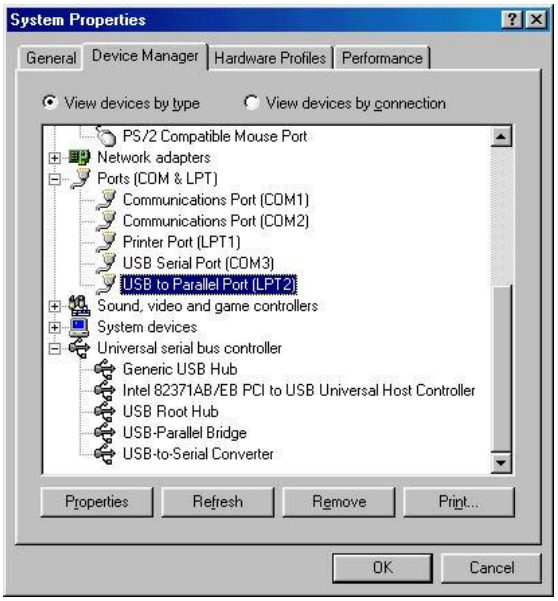

Figure 5

4. If you have installed a printer device before, click **Start**, **Settings**, **Printers**. Right-click the default installed printer and click on **Properties**. The Properties dialog box of the installed printer will appear on your screen.

5. Click the **Details** folder tab and change the printer port to **LPT2: (USB to Parallel Port)**.

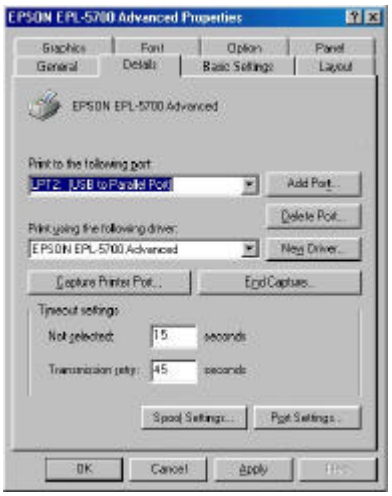

Figure 6

6. If you do not have a printer installed yet, click on **Start**, **Settings**, **Printers**, **Add Printer**. The **Add Printer Wizard** will start and assist you in installing a new printer device. Select the printer manufacturer and model name from the list provided by the wizard or use the printer driver diskette supplied by your printer.

7. When prompted which port the printer will use, click on **LPT2: USB to Parallel Port**.

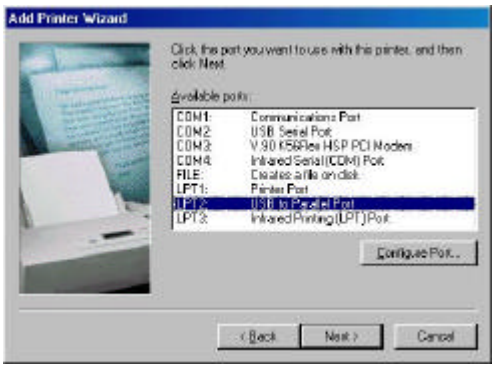
Add Printer Wizard
Click the port you want to use with this printer, and then click Next.
Available ports:
COM1: Communications Port
COM2: USB Serial Port
COM3: V.90 K56Flex HSP PCI Modem
COM4: Infrared Serial (COM) Port
FILE: Creates a file on disk
LPT1: Printer Port
LPT2: USB to Parallel Port
LPT3: Infrared Printing (LPT) Port
Configure Port...
< Back
Next >
Cancel

Figure 7

8. Follow the succeeding instructions to complete the installation and run **Print Test Page** to see if it can print without problems.

For WINDOWS 2000 and XP:

1. Turn off your printer. Plug the cable to connect USB PORT REPLICATOR parallel port and printer. Turn on the printer afterwards.
2. Turn on your computer and plug in the USB cable to connect the USB PORT REPLICATOR and the USB port of PC.
3. If you have installed a printer device before, click **Start**, **Settings**, **Printers**. Right-click the default installed printer and click on **Properties**. The Properties dialog box of the installed printer will appear on your screen.
4. Click the **Ports** tab and change the printer port to **USB001 (Virtual printer port to USB)**.

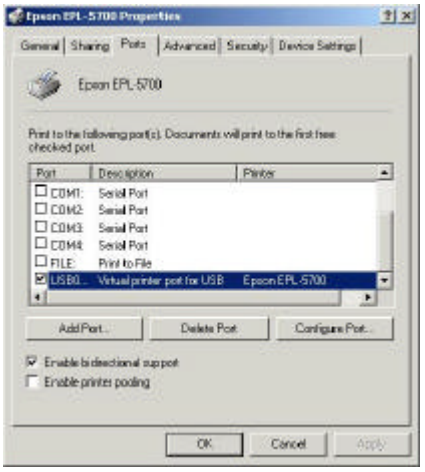

Figure 17

5. If you do not have a printer installed yet, click on **Start**, **Settings**, **Printers**, **Add Printer**. The **Add Printer Wizard** will start and assist you in installing a new printer device. Select the printer manufacturer and model name from the list provided by the wizard or use the printer driver diskette supplied by your printer.
6. When prompted which port the printer will use, click on **USB001 (Virtual printer port to USB)**.

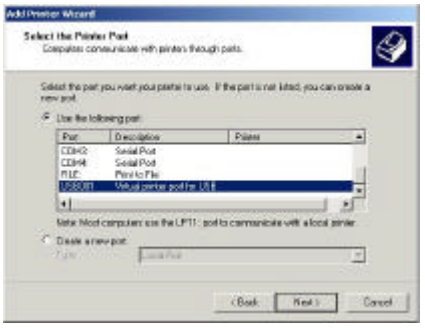
Add Printer Wizard
Select the Printer Port
Computers communicate with printers through ports.
Select the port you want your printer to use. If the port is not listed, you can create a new port.
Use the following port:
Port
Description
Printer
COM2: Serial Port
COM4: Serial Port
FILE: Print to File
USB001 Virtual printer port for USB
Note: Most computers use the LPT1: port to communicate with a local printer.
Create a new port:
Type:
Local Port
< Back
Next >
Cancel

Figure 18

Set up the HyperTerminal with USB to serial port

Follow the steps below to configure your HyperTerminal with USB to serial COM port setting:

1. Make sure that HyperTerminal is installed in your system. If not, please click **Start, Settings, Control Panel**, double click **Add/Remove Programs**, choose **Windows Setup** page, **Communications,** click **Details** button, enable **HyperTerminal** to install the program to your Windows system.

2. Please click on **Start, Settings, Control Panel**, double click **System**, and click on **Device Manager**. Check which COM port is located by USB to serial port.

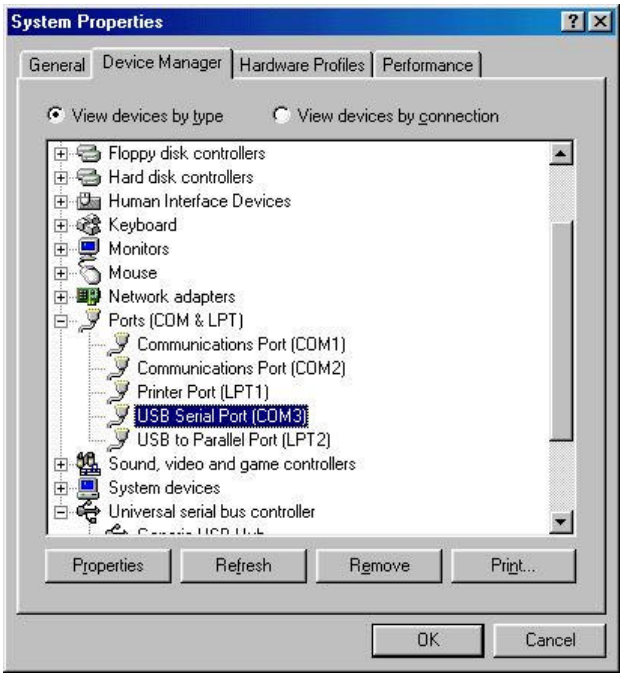

Figure 8

3. If you have setup HyperTerminal before, please run **Start, Programs, Accessories, Communications, HyperTerminal, HyperTrm.exe**. Click **File**, **Properties**. The Properties dialog page will appear on your screen. If you are first time to setup HyperTerminal, you will see this page during the setup procedure.

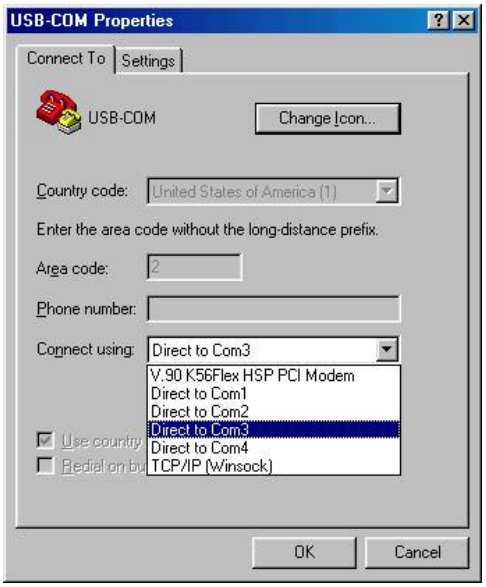

Figure 9

4. Click the "**Connect using**" item to indicate the proper COM port which appeared in step 1, and follow the succeeding instructions to complete the setup.

Uninstalling the Driver Program

If you want to remove the USB DOCK driver program, you can uninstall it by following the steps below:

WINDOWS 98/98SE and Me:

a. Unplug the USB cable from your PC.
b. Run the **Uninst_USBDock_98_Me.exe** program from the USB DOCK driver diskette and reboot the PC.

WINDOWS 2000 and XP:

c. Unplug the USB cable from your PC.
d. Run the **Uninst_USBDock_2000_XP.exe** program from the USB DOCK driver diskette.

APPLICATION NOTE

1. Determine why support of USB port is not present:
   First, download Usbready.exe from the web site www.octinc.com.tw, if you have any problem to download, please contact us via service@octinc.com.tw. Please run the program, and click the **Details** button, it will help you find the reason why USB support is disabled.

- Click on the **Details** button.
- If the USB class Host Controller windows displays "No USB Host Controller Found", it means the USB Host Controller has not been detected.
- If your PC does not have USB connector, this system will not support USB in any Windows Version.
- For PC already with USB connector, check the USB Class Host controller to see if it displays any message like" Standard", "Intel", " Universal", or "Open" Host Controller, it means the hardware support is present under an incompatible version of Windows.

2. USB DOCK normally derives its own power from PC Host. When system power plugged in to the USB port of PC or notebook, the Large LED will turn green, and the serial, parallel, keyboard and mouse can operate without the switching adapter. Please note that the 4 downstream ports will not function before the power adapter is connected. However, you may use the power by connecting an external 5 voltage, 1.8A DC power which is UL, CE, T-mark or locally approved. For Polarity, see the following:

3. Unknown Device:
   If all the installation process has been completed and some of the devices still don't work, please go to: My Computer/Property/Device Manager/USB, check COM port, printer, keyboard, mouse or Hub to see if there are any "Unknown device" appear on the screen. You need to "Remove" and "Refresh", start the installation processes again. After trying all the above mentioned process and your device still cannot work, please contact your technical people or send e-mail to: service@octinc.com.tw

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FCC Statement

This device generates and uses radio frequency and may cause interference to radio and television reception if not installed and used properly. This has been tested and found to comply with the limits of a Class B computing device in accordance with the specifications in Part 15 of FCC Rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by plugging the device in and out, the user can to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Technical support:

TEL: 886 2 2910 7090 E-mail: service@octinc.com.tw